

2RP- 750  
2RP- 751  
2RP- 765

April 28, 2011

Mr. Mike Bratcher  
New Mexico Oil Conservation Division  
1301 W. Grande Avenue  
Artesia, NM 88210

Re: Anemone ANE Federal #2  
30-015-27982  
Section 9, T22S-R24E  
Eddy County, New Mexico

Dear Mr. Bratcher:

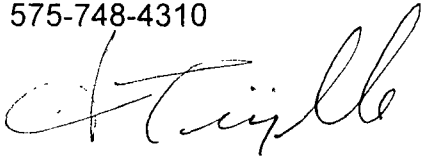
Yates Petroleum Corp. would like to submit for your consideration the enclosed work plan for the above captioned well. Scope of work described in the plan will be conducted as soon as the work plan is approved and a contractor can be scheduled.

If you have any questions call me at

Thank you.

Yates Petroleum Corporation

Amanda Trujillo  
Environmental Scientist  
575-748-4310



Enclosure(s)

**Yates Petroleum Corporation**

**Anemone ANE Federal #2 Work Plan**

**Section 9, T22S-R24E**

**Eddy County, New Mexico**

**April 28, 2011**

## **I. Location**

North of Carlsbad on Hwy 285 for 12.5 miles to Hwy 137, turn west and travel 14 miles to caliche lease road. Turn east on caliche road for 1.5 miles. Turn South for .4 of a mile then turn SW for .3 of a mile.

Section 9, T22S-R24E Eddy County, New Mexico

## **II. Background**

Over the course of three months the Anemone Battery has experienced three releases. During the course of clean up for the previous releases it was determined the bedrock beneath the tanks and piping was going to severely hinder the clean up process. Hand digging produced inadequate results at best.

Unfortunately, the Anemone Battery is a keystone battery in our Indian Basin operations. Therefore, our goal was to not remove the battery from production for an extended amount of time. In order to accomplish both the reclamation requirements and producing requirements it was determined the best course of action was reconstruct the battery in another location on the pad.

## **III. Surface and Ground Water**

Area soil series is an *Ector: extremely rocky loam* according to NRCS Web Soil Survey, characterized by 9 – 25 % slope, well drained and a textural class of rocky loam. Depth to ground water is approximately 585 feet deep according to the State Engineer's Office. Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

The ranking for this site is zero (0) based on the as following:

Depth to ground water	> 100'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

## **IV. Soils**

The Ector series is characterized by a textural class of a rocky loam with a parent material of residuum weathered from limestone. Characteristics also include high hydraulic conductivity, however lithic bedrock can be found at a depth of 4 – 20 inches. Description of landforms includes hills and ridges with vegetation dominated primarily by a midgrass/mixed-shrub/forb community.

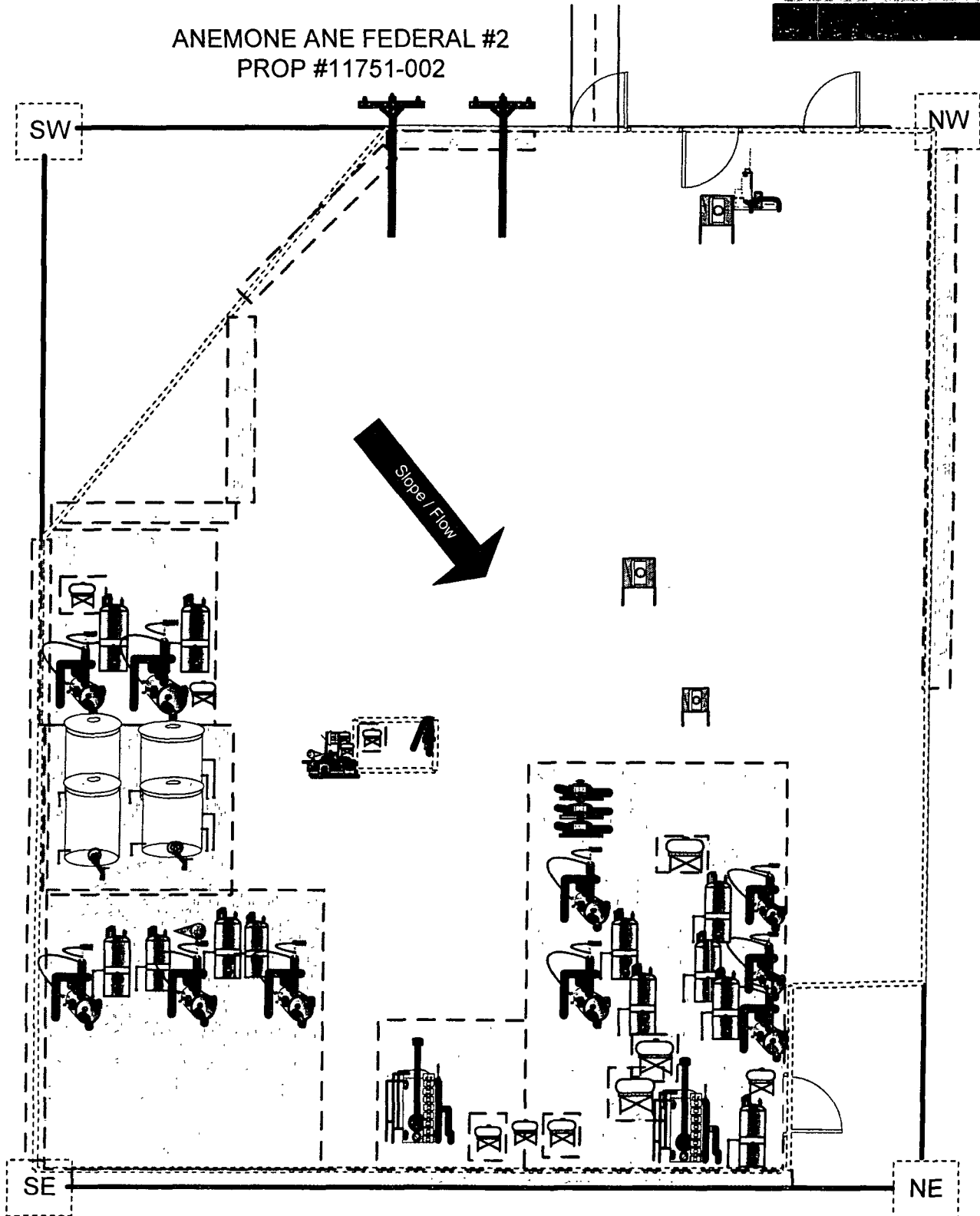
## **V. Scope of Work**

Upon approval of this work plan, Yates Petroleum Corp. will have a contractor construct a new battery on the south end of the pad. The equipment will be re-plumbed to the new tanks. The battery will be built with a 40 mil liner. Once this is completed the old plumbing can be removed from the spill area and excavation can begin, in the impacted area. Vertical and horizontal delineation samples will be taken and analysis ran for Total Petroleum Hydrocarbons (TPH) and Benzene, Toluene, Ethyl-Benzene, and Xylene (BTEX) once all contaminated material has been removed. Contamination levels will be evaluated in accordance with the *OCD Guidelines for Remediation of Leaks, Spills and Releases* for a site ranking of zero. Chloride samples will be taken for documentation purposes.

# YATES PETROLEUM CORPORATION

**Thursday, April 28, 2011**

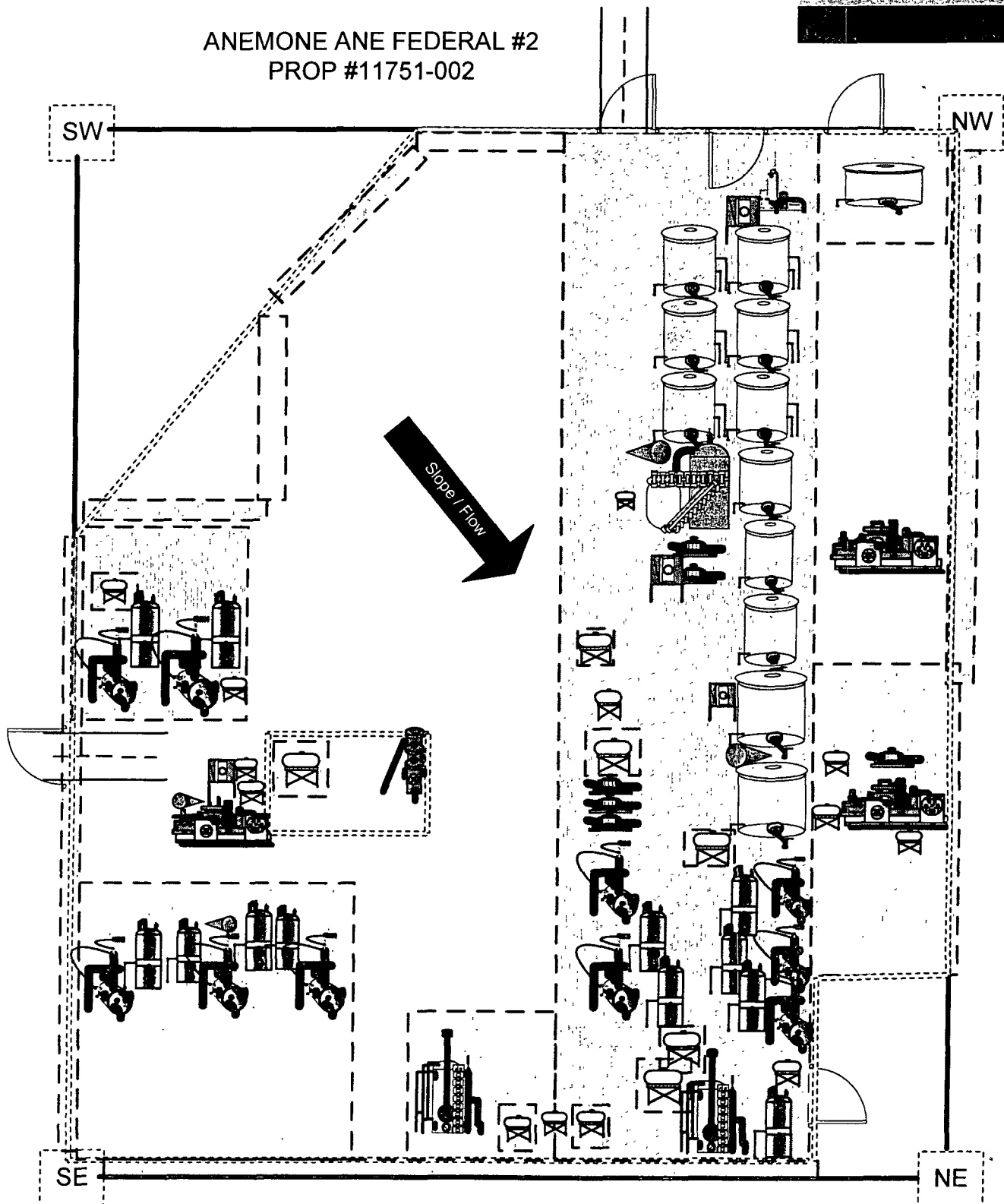
ANEMONE ANE FEDERAL #2  
PROP #11751-002



# YATES PETROLEUM CORPORATION

Thursday, April 28, 2011

ANEMONE ANE FEDERAL #2  
PROP #11751-002



## Eddy Area, New Mexico

### EE—Ector extremely rocky loam, 9 to 25 percent slopes

#### Map Unit Setting

*Elevation:* 3,300 to 4,800 feet  
*Mean annual precipitation:* 10 to 18 inches  
*Mean annual air temperature:* 58 to 62 degrees F  
*Frost-free period:* 195 to 210 days

#### Map Unit Composition

*Ector and similar soils:* 100 percent

#### Description of Ector

##### Setting

*Landform:* Hills, ridges  
*Landform position (two-dimensional):* Footslope, shoulder, toeslope, backslope  
*Landform position (three-dimensional):* Side slope, head slope, crest, nose slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Residuum weathered from limestone

##### Properties and qualities

*Slope:* 9 to 25 percent  
*Depth to restrictive feature:* 4 to 20 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 60 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water capacity:* Very low (about 0.4 inches)

##### Interpretive groups

*Land capability (nonirrigated):* 7s  
*Ecological site:* Limestone Hills (R070DY151NM)

##### Typical profile

*0 to 6 inches:* Very cobbly loam  
*6 to 60 inches:* Bedrock

## Data Source Information

Soil Survey Area: Eddy Area, New Mexico  
Survey Area Data: Version 9, Feb 20, 2009

## Ecological Dynamics Description

The distribution of vegetation within the site is highly dependent on the local environment. Elevation, soil moisture, aspect, slope gradient, latitude, variability of the soils, and amount of rock outcrop are the major factors controlling plant species composition and distribution. Two Historic Climax Plant Communities (HCPC) are recognized for this site. A midgrass/mixed shrub community occurs primarily on south facing slopes and ridgetops while a midgrass/tree/shrub savanna community occurs on north facing slopes.

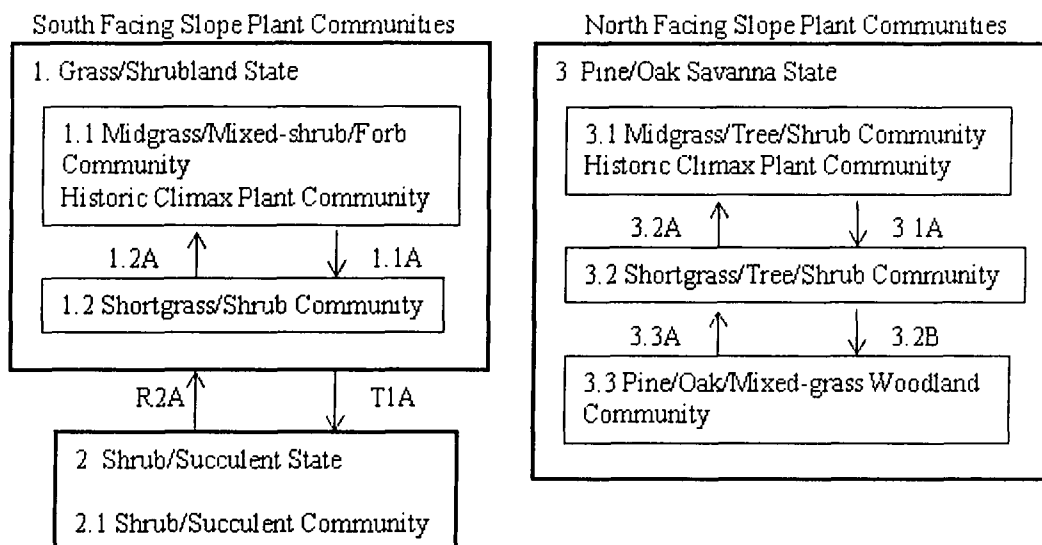
Historically, the site has evolved with native herbivores such as mule deer, desert bighorn sheep, and pronghorn antelope (on low relief areas in some areas.). Bison were not documented in the historical record as being present in any significant amount due to contributing factors such as lack of water and steep topography. Small lightning induced fires were mostly likely common mainly because of the adequate amount of fine fuels present.

Early records suggest cattle, sheep, goats, and horses were introduced into the southwest from Mexico in the mid-1500's. However, extensive ranching began in the 1880s. Sheep and goats grazed this site extensively up to the mid 1900s. Direct fire suppression and overutilization of plant resources in some areas most likely began during this time.

The impact of improper grazing within this site specifically will lead to a reduction of palatable midgrasses and forbs and an increase of woody plants such as juniper and catclaw acacia. In addition, direct fire suppression will also allow the woody plants to increase. On north facing slopes, fires can reopen somewhat dense woodlands if enough fine fuels are present.

The following diagram suggests general pathways that the vegetation on this site might follow. There are other plant communities and states not shown on the diagram. This information is intended to show what might happen in a given set of circumstances; it does not mean that this would happen the same way in every instance. Local professional guidance should always be sought before pursuing a treatment scenario.

Limestone Hill  
R070DY151NM



Legend

- 1.1A Heavy Continuous Grazing, Fire Suppression
- 1.2A Prescribed or No Grazing, Prescribed Burning (low relief areas)
- T1A Improper Grazing Management, Fire Suppression,
- R2A, Prescribed or No Grazing and Prescribed Burning (low relief areas and if adequate fuels is present)
- 3.1A Heavy Continuous Grazing, No Fire
- 3.2A Prescribed or No Grazing, Prescribed Burning
- 3.2B Heavy Continuous Grazing, No Fire
- 3.3A Prescribed or No Grazing and Prescribed Burning (if fine fuels have recovered)

State Transition Diagram for R070DY151NM -- Limestone Hills Ecological Site